

POST GRADUATE DEPARTMENT OF BOTANY,
UNIVERSITY OF MYSORE,
MANASAGANGOTRI,
MYSORE 570 006,
KARNATAKA,
April 27, 1983.

K. GOPALAKRISHNA BHAT
M. S. DINESH
C. R. NAGENDRAN

33. GENUS *TYPHA* IN THE NORTH WESTERN HIMALAYAS

Typha, a highly variable genus, is distributed in Asia, Europe, Africa, Tropical Australia, South and Central California with about 13 existing and 2 fossil species. It is represented by 3 species in the Kashmir Himalayas. All the species are economically very important. They are valued as ornamental plants on the borders of ponds, pools and irrigation canals.

In Kashmir all the species of *Typha* are cultivated for the preparation of floating islands as prevention against erosion, however, caution needs to be exercised to control them lest they should multiply excessively.

Dry fruiting spikes are used for decoration. The strong fibrous culms or leaves are used in weaving mats and basket work. The fine plush got from the hairs of female spike were used in the stuffing of pillows, but the practice has been discontinued. The hairs of female spike locally called *kalroon* mixed with mud is used for plastering walls, which gives smoothness to it and forms an excellent base for paint work. The leaves are mainly used for the weaving of mats (*wagoove*) and prayer rugs; the peduncle is used in the preparation of window curtains. The stems and leaves are also used for thatching huts and house boats.

KEY TO THE SPECIES

1. Male and female spikes not contiguous; usually separated by 1-3 cm interval. Leaves flat above,

convex beneath, 13 mm wide
..... *T. angustata*

1. Male and female spikes contiguous, not separated. Leaves narrow slightly channeled; wavy margined above the middle, less than 13 mm wide
 2. Plants more than 2 m long; stigma ovate-lanceolate or spatulate
..... *T. elephantina*
 2. Plants less than 2 m long; dwarf; stigma subobtusate *T. laximannii*

Typha angustata Borry and Chaub. Exped. in Bory Sci. Mores 3: 338 (1832); Hook. f. Fl. Brit. Ind. 6, 489 (1893); Graebner, in Pflanzenr. 2: 14. f. 4F, (1900); Subramanyam, Aq. Angios. 74 (1962).

In the field it can be readily distinguished by its very long, erect leaves and the dense monoecious interrupted spicate inflorescence, fuzzy brown at maturity. Leaves sheathing at the base, conspicuously auriculate; auricles scarious. Stigma fleshy; ovary linear or linear oblong; sterile ovaries cuneate with a rudimentary style on the truncate flattened apex; the hairs on the stipe are in whorls terminating into a club-shaped or ligulate tips. Fruits obconical or fusiform, 1 mm long, tapering into the stalk.

Common in marshes, shallow waters of lakes; along streams and sides of irrigation canals; Nagin lake AMK 3732; Hokhar sar AMK 3944; Dal lake AMK 3888.

Distribution. Asia, Europe, Africa, Himalayas, Kashmir.

Typha elephantina Roxb. Fl. Ind. 3: 566

MISCELLANEOUS NOTES

(1832); Hook. f. l.c. 481; *T. latifolia* Edgew, Proc. Linn. Soc. 6. 194 (1862).

Superficially resembling *T. angustata* but can be distinguished from it in having male and female spikes contiguous; mature female spikes much longer and thicker; stigma ovate-lanceolate or spatulate; sterile ovaries ellipsoid, tipped at the round apex by a rudimentary style. Fruit cylindrical.

Mostly in the marshes, on the banks of lakes; Dal lake AMK 3733; Nagin lake (near Nandpora) AMK 3829; Hariparbat (inside) Fort AMK 3946.

Distribution. Asia, Europe, America, Himalayas, Kashmir.

An anomalous form of the species with 2-4 pistillate spikes arising from a common stalk, with a single terminal staminate spike was found growing near Habak, Dal lake and Harwan (Srinagar). This anomalous spike showed no other morphological difference with the normal *T. elephantina* Roxb. regarding vegetative and floral characters and this seems to be conspicuous anomalous feature for the species and its frequency of occurrence was

in no way less than that of the normal *T. elephantina* Roxb. It was also observed that the normal species grows under similar micro-climatic conditions at various spots within this altitudinal range.

Typha laximannii Lepech. in Nva. Acta Petersh 84: 355 (1801); Hook. f. l.c. 6. 586.

Rhizomatous perennial herbs, can be differentiated from the other two species in being smaller in size, leaves distichiously arranged equal or longer than spikes, sheathing at the base; male and female flowers usually contiguous; stigma subobtusate. Fruit 1 mm long, cylindrical.

Common in marshes; on the banks of the lakes; sides of the rice fields, Bemna AMK 3889; Shalteng AMK 3945.

Distribution. Russia, Pakistan, India, Kashmir.

ACKNOWLEDGEMENTS

We thank the University Grants Commission for providing the financial assistance.

A. MAJEED KAK
SULOCHANA DURANI¹

DEPARTMENT OF BOTANY,
ISMALIA COLLEGE OF SCIENCE AND
COMMERCE,
SRINAGAR 190 002, KASHMIR (INDIA),
January 27, 1981.

¹ Department of Botany, Kashmir University,
Srinagar 190 006.

34. DISTRIBUTIONAL NOTE ON SOME INDIAN GRASSES

While working on the family Poaceae at Central National Herbarium we noticed a few grasses of doubtful identity. A critical study of these resulted in finding new distributional areas for the following grasses.

1. *Chrysopogon serrulatus* Trin.

This grass has been reported from NW India, Bihar and Nepal (Hara 1966). A specimen collected from Arunachal Pradesh and identified as *Chrysopogon fulvus* (Spreng.)